

HISTORIC PROPERTY INVENTORY FORM

IDENTIFICATION SECTION

Field Site No. 292-T **OAHP No.** _____ **Date Recorded** 29 Feb 1996
Site Name Historic Exhaust Gas Laboratory Revised 9 July 1997
Common Fission Products Release Laboratory
Field Recorder M.S. Gerber
Owner's Name U.S. Department of Energy, Richland Operations Office
Address P.O. Box 550
City/State/Zip Code Richland, WA 99352

Status

- ☒ Survey/Inventory
☐ National Register
☐ State Register
☐ Determined Eligible
☐ Determined Not Eligible
☐ Other (HABS, HAER, NHL)
☐ Local Designation

Photography

Hanford Photography Lab:
Neg. #96010247-13 CN
Photography Neg. No. HCRL: Roll 272; frames 33, 34, & 37
(Roll No. & Frame No.)
View of North, south, & east exterior facades
Date January 1996 and 10 July 1997

Photo at right: Roll 272, frame 34
View of south and east facades

Classification

District Status

Contributing

District/Thematic Nomination Name

☐ District ☐ Site ☒ Building ☐ Structure ☐ Object
☒ NR ☐ SR ☐ LR ☐ INV
☒ **Non-Contributing** ☐

Hanford Site Manhattan Project and Cold War Era Historic District

Description Section

Materials & Features/Structural Types

Building Type Industry
Plan Irregular
Structural System Concrete Block
No. of Stories One

Roof Type

☐ Gable ☐ Hip
☒ Flat ☐ Pyramidal
☐ Monitor ☒ Other (specify)
☐ Gambrel West portion slopes
☒ Shed

Roof Material

☐ Wood Shingle
☐ Wood Shake
☐ Composition
☐ Slate
☐ Tar/Built-up
☐ Tile
☐ Metal (specify)
☒ Other (specify) Concrete Slab
☐ Not visible

Foundation

☐ Log ☐ Concrete
☐ Post & Pier ☐ Block
☐ Stone ☒ Poured
☐ Brick ☐ Other (specify)
☐ Not visible

Cladding (Exterior Wall Surfaces)

☐ Log
☐ Horizontal Wood Siding
☐ Rustic/Drop
☐ Clapboard

☐ Wood Shingle
☐ Board and Batten
☐ Vertical Board
☐ Asbestos/Asphalt
☐ Brick
☐ Stone
☐ Stucco

☐ Terra Cotta
☒ Concrete/Concrete Block
☐ Vinyl/Aluminum Siding
☐ Metal (specify)
☐ Other (specify)

Integrity

(Include detailed description in
Description of Physical Appearance)

	Intact	Slight	Moderate	Extensive
Changes to plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Changes to windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to original cladding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to interior	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) <u>Equipment</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

State of Washington, Department of Community Development
Office of Archaeology and Historic Preservation
111 21st Avenue Southwest, Post Office Box 48343
Olympia, Washington 98504-8343 (206)753-4011

LOCATION SECTION

Address Building 292-T, 200 West Area
City/Town/County/Zip Code Richland/Benton County/99352
Twp 12 N **Range** 26 E **Section** 6 **1/4 Section** NW **1/4 1/4 Sec** NW
Tax No./Parcel No. _____ **Acreage** _____
Quadrangle or map name Gable Butte, Washington Quad. - 7.5 min. series 1986
UTM References Zone 11 **Easting** _____ **Northing** _____
Plat/Block/Lot _____
Supplemental Map(s) _____



High Styles/Forms (Check one or more of the following)

<input type="checkbox"/> Greek Revival	<input type="checkbox"/> Spanish Colonial Revival/Mediterranean
<input type="checkbox"/> Gothic Revival	<input type="checkbox"/> Tudor Revival
<input type="checkbox"/> Italianate	<input type="checkbox"/> Craftsman/Arts & Crafts
<input type="checkbox"/> Second Empire	<input type="checkbox"/> Bungalow
<input type="checkbox"/> Romanesque Revival	<input type="checkbox"/> Prairie Style
<input type="checkbox"/> Stick Style	<input type="checkbox"/> Art Deco/Art Moderne
<input type="checkbox"/> Queen Anne	<input type="checkbox"/> Rustic Style
<input type="checkbox"/> Shingle Style	<input type="checkbox"/> International Style
<input type="checkbox"/> Colonial Revival	<input type="checkbox"/> Northwest Style
<input type="checkbox"/> Beaux Arts/Neoclassical	<input type="checkbox"/> Commercial Vernacular
<input type="checkbox"/> Chicago/Commercial Style	<input type="checkbox"/> Residential Vernacular (see below)
<input type="checkbox"/> American Foursquare	<input checked="" type="checkbox"/> Other (specify)
<input type="checkbox"/> Mission Revival	<u>Industrial Vernacular</u>

Vernacular House Types

<input type="checkbox"/> Gable Front	<input type="checkbox"/> Cross Gable
<input type="checkbox"/> Gable Front and Wing	<input type="checkbox"/> Pyramidal/Hipped
<input type="checkbox"/> Side Gable	<input type="checkbox"/> Other (specify)

NARRATIVE SECTION

Study Unit Themes (check one or more of the following)

- | | |
|--------------------------|-------------------------------------|
| <input type="checkbox"/> | Agriculture |
| <input type="checkbox"/> | Architecture/Landscape Architecture |
| <input type="checkbox"/> | Arts |
| <input type="checkbox"/> | Commerce |
| <input type="checkbox"/> | Communications |
| <input type="checkbox"/> | Community Planning/Development |

- | | |
|--------------------------|---------------------------------|
| <input type="checkbox"/> | Conservation |
| <input type="checkbox"/> | Education |
| <input type="checkbox"/> | Entertainment/Recreation |
| <input type="checkbox"/> | Ethnic Heritage (specify) _____ |
| <input type="checkbox"/> | Health/Medicine |
| <input type="checkbox"/> | Manufacturing/Industry |
| <input type="checkbox"/> | Military |

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> | Politics/Government/Law |
| <input type="checkbox"/> | Religion |
| <input type="checkbox"/> | Science & Engineering |
| <input type="checkbox"/> | Social Movements/Organizations |
| <input type="checkbox"/> | Transportation |
| <input checked="" type="checkbox"/> | Other (specify) <u>Manhattan Project and Cold War Era</u> |
| <input checked="" type="checkbox"/> | Study Unit Sub-Theme(s) <u>Health Safety, Operations Support;</u>
<u>Waste Management (Air Monitor)</u> |

Statement of Significance

Date of Construction 1944 Architect/Engineer/Builder E.I. du Pont de Nemours Corporation

<input checked="" type="checkbox"/>	In the opinion of the surveyor, this property appears to meet the criteria of the National Register of Historic Places.
<input checked="" type="checkbox"/>	In the opinion of the surveyor, this property is located in a potential historic district (National and/or local).

The 292-T Building was constructed during World War II as the Exhaust Gas Laboratory. Its purpose was to house monitoring equipment to test and measure the components of the gases released from the 291-T Exhauster Building and Stack. Although gas monitoring equipment was originally planned for the 291-T facility, du Pont Corporation scientists decided in the spring of 1944 that such equipment should be placed in a separate building due to "cramped quarters and possible interference from steam engine vibration" within the 291-T. By the autumn of 1945, radiation levels in the 292-T Building were so high that an exclusion fence was built around it. After T-Plant ceased its radiochemical processing mission in 1956, the 292-T Building was retired until 1959, when it was modified as the Fission Product Volatilization Studies Test Facility. Equipment was installed to test the volatilization of fission products (such as the oxidation of ruptured fuel elements in air) under controlled conditions. The 292-T Building served as the prototype to test the filters that later were installed to "confine" the exhaust gases in Hanford's single pass reactors in Project CG-7901 during 1960-1961. In 1964, an annex was constructed on the east side, and in 1970 another annex was built on the west side. Both of these additions housed additional monitoring and sampling equipment for T-Plant's canyon exhaust. The 292-T Building continued to function in gas sampling and testing functions until it was laid away to await decontamination and decommissioning in the 1980s. As an exhaust gas testing facility, the 292-T Building played a significant role in assuring public safety by monitoring airborne radiochemical emissions and establishing reactor exhaust gas parameters. It is therefore the conclusion of the U.S. Department of Energy that Building 292-T is eligible for inclusion in the National Register of Historic Places under Criterion A as a contributing property within the Hanford Site Manhattan Project and Cold War Era Historic District.

Description of Physical Appearance

The 292-T Building was constructed as a single story, reinforced concrete and concrete block building adjacent to the 291-T Exhauster Building and Stack. The 292-T Building sits on a nine inch thick, reinforced concrete curtain wall foundation and has a four inch thick concrete floor and concrete block walls. The four inch thick, reinforced concrete roof slab is supported by concrete beams and covered with built-up felt, gravel surfacing. The building measured 16 feet by 21 feet by about 19.5 feet tall with a total area of 336 square feet. There are two outside doors, no windows, and two roof ventilators. An overhead, wooden catwalk along one side of the building provided access to the upper building equipment. A two inch, overhead, carbon sampling line runs from the stack to the 292-T Building. Gases were drawn into the building and passed through a water scrubber containing soda ash solution, dried in gas refrigeration equipment, and then counted in a chamber to measure Xenon-133 activity. The scrubbing water was then counted in a separate apparatus to measure Iodine-131 activity. Additions to the building were built in 1964 and 1970. The first addition (on the east side of the building) was 11 feet by 16 feet by nine feet high, and the second addition (on the west side of the building) measured 20 feet by 24 feet by nine feet high. The additions are similarly constructed of concrete block walls, concrete foundation and interior flooring, but the roofs are metal. The roof on the east addition is flat, while the roof on the west addition has a slightly sloping shed roof. The east addition has one door on the east wall, and the west addition has a door on the south wall. There are no windows on either addition. One of the original building doors was blocked off as a result of the later construction.

HISTORIC PROPERTY INVENTORY FORM

Building 292-T (Continuation Sheet 1 of 1)

Major Bibliographic References

E.I. du Pont de Nemours Corporation. 1945. *Construction of Hanford Engineer Works: History of the Project* . HAN-10970, Vol. 3. Wilmington, Delaware.

E.I. du Pont de Nemours Corporation. 1946. *Operation of Hanford Engineer Works: History of the Project* . HAN-73214, (Books 7 & 12). Wilmington, Delaware.

Drawings W--75251, SK-2-3575, H-2-33750, H-2-33158, H-2-32761.

Gerber, M.S. 1994. *A Brief History of the T-Plant Facility at the Hanford Site* . WHC-MR-0452, Add. 1. Westinghouse Hanford Company. Richland, Washington.

Palmer, J.H. 1959. *High Efficiency Filter Burning Humidity Tests for Project CGI-791, IPD Confinement Program* . HW-66133 DEL. General Electric Hanford Company, Richland, Washington.

Schipper, H.H. 1959. "Fission Product Volatilization Studies Test Facility - 292-T Building (Project No. CGH-838)." Directive No. HW-484. U.S. Atomic Energy Commission, Richland, Washington.